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LORD LINDSAY, M.P., F.R.S., President, in the Chair.

Maures Horner, Esq., 15 Bishopsgate Street Within, E.C.;
E. E. Markwick, Esq., East Acton, Middlesex;
Arthur E. Nevins, Esq., 3 Abercrombie Square, Liverpool; and
Charles Clement Walker, Esq., Lilleshall Old Hall, Newport, Shropshire;

were balloted for, and duly elected Fellows of the Society.

Observations of Encke's Comet, 1878.

By J. Tebbutt, Esq.

The positions of Encke's Comet which I now send were determined by me with a ring-micrometer on the 4½-inch Equatoreal. I found it very difficult to observe the comet owing to the absence of a nucleus or other well defined condensation. All I could do was to note the bisection of the comet at the edges of the ring. The larger telescopes of the southern hemisphere will doubtless furnish more accurate places. The comet was first seen by me on the 3rd August, and observed till the 28th; but as it was excessively faint after the 17th, I do not think the positions subsequent to that date will be of any real value. With some few exceptions, in which the correction could not amount to a second of arc, the differential observations have been corrected for refraction, but in every case the proper motion corrections have been applied. The star places derived from the Catalogues of Lalande and Weisse have been brought up to the mean epochs 1839 and 1852 respectively by means of the precessions in the Catalogues, and the precessions recalculated from Professor Peter's constants. By means of these precessions the mean places have been brought up from 1800 and 1825 to the beginning of 1878. In computing the parallax corrections, the log distances from the Earth have been taken from Dr. von Asten's Ephemeris in No. 2197 of the *Astronomische Nachrichten*, and the mean equatoreal horizontal parallax of the Sun has been

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adopted 8″·85. In turning the observations to account, it will be advisable to add 7 seconds of time to the longitude hitherto assumed for my Observatory; the longitude will therefore be 10^h 3^m 23^s E.

It appears that during the period embraced by the observations the comet was about 17 seconds of time east, and 3 minutes of arc south of the positions assigned to it in the Ephemeris of Dr. von Asten.

Observatory, Windsor, N.S. Wales,
November 16, 1878.

Apparent Places of Encke's Comet. 1878.

Date August.	Windsor Mean Time. h m s	Comet's App. R.A. h m s	Correction for Parallax. s +	Comet's App. N.P.D. ° ′ ″	Correction for Parallax. ″ +	No. of Comps.	
5	6 29 45	10 16 14·26	0·42	83 42 31·5	4·4	4	1
6	6 50 9	10 23 59·00	0·43	84 52 29·1	4·4	4	2
7	6 46 12	10 31 32·85	0·43	86 1 17·5	4·4	1	3
8	6 38 55	10 39 3·07	0·43	87 8 51·1	4·5	4	4
9	6 45 39	10 46 36·41	0·44	88 17 48·1	4·5	6	5
10	6 41 9	10 54 2·74	0·44	89 25 31·2	4·5	5	6
11	6 42 42	11 1 28·99	0·44	90 33 26·0	4·5	2	7
12	7 7 50	11 9 3·91	0·45	... ...	...	2	8
13	7 3 15	11 16 28·31	0·46	92 49 12·7	4·5	2	9
14	6 56 4	11 23 49·61	0·45	93 54 36·1	4·5	7	10
15	6 56 11	11 31 13·87	0·46	95 0 26·4	4·5	7	11
16	6 51 4	11 38 36·71	0·45	96 5 51·2	4·4	3	12
17	6 59 0	11 46 2·37	0·46	97 10 8·6	4·4	10	13

Mean Places of the Stars of Comparison for 1878·0 *and Apparent Places for the Dates of Observation.*

Star of Comp.	Mean R.A. h m s	App. R.A. s	Mean N.P.D. ° ′ ″	App. N.P.D. ″	Authority for Star's Mean Place.
1	10 16 55·65	57·20	83 41 9·6	17·9	Lalande. No. 20142.
2	10 25 58·38	59·93	84 43 45·1	52·1	Radcliffe Obs. 1872 & 1874.
3	10 37 47·81	49·37	86 8 7·7	15·5	Lalande. No. 20708.
4	10 37 10·00	11·51	87 11 48·0	55·9	Lalande. No. 20697.
5	10 45 57·63	59·18	88 19 40·3	48·7	Wash. Cat. 1845–71. No. 4533.
6	10 56 18·35	19·92	89 26 15·5	24·6	Lalande. Nos. 21183 & 4.
7	11 6 0·38	1·96	90 30 49·8	59·5	Lalande. No. 21429.
8	11 9 34·86	36·44	... ...	...	Weisse XI. No. 127.
9	11 9 58·22	59·78	... ...	...	Lalande. Nos. 21525 & 6.
9	... ...	...	92 48 26·3	36·5	Wash. Cat. 1845–71. No. 4709.
10	11 23 1·28	2·87	93 46 30·8	41·7	Weisse XI. No. 377.
11	11 28 9·14	10·73	94 51 13·3	24·6	Wash. Cat. 1845–71. No. 4829.
12	11 43 1·75	3·37	96 13 4·3	16·3	Weisse XI. No. 726.
13	11 44 57·02	58·64	97 18 43·9	56·3	Wash. Cat. 1845–71. No. 4961.

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